

LISTING OF CLAIMS

1-8. (canceled)

9. (previously presented) A method of forming an electrically conductive pathway, comprising steps of:

- a) jetting a first ink-jettable composition onto a substrate, said first composition including a first liquid vehicle and a palladium aliphatic amine complex solvated therein;
- b) overprinting or underprinting a second composition with respect to at least a portion of the first ink-jettable composition to form a predetermined pattern, said second composition including a second liquid vehicle and reducing agent solvated therein; and
- c) applying heat to the predetermined pattern sufficient to cause reaction between the reducing agent and the palladium aliphatic amine complex to form palladium metal without substantially altering the substrate.

10. (original) The method of claim 9, further comprising depositing a conductive metal onto the palladium metal.

11. (original) The method of claim 10, wherein the conductive metal is selected from the group consisting of copper, gold, palladium, nickel, silver, rhodium, platinum, Co-Fe-B, Co-Ni-P, Co-Ni-Fe-B, Ni-Co, and mixtures or alloys thereof.

12. (original) The method of claim 10, wherein the step of depositing is an electroless deposition process.

13. (original) The method of claim 10, wherein the predetermined pattern is a non-continuous pattern of palladium aliphatic amine complex which, once reduced, is a seed for deposition of the conductive metal.

14. (original) The method of claim 9, wherein the second composition is underprinted with respect to the first ink-jettable composition.

15. (original) The method of claim 9, wherein the second composition is overprinted with respect to the first ink-jettable composition.

16. (original) The method of claim 9, wherein the aliphatic amine of the palladium aliphatic amine complex is selected from the group consisting of diamine alkanes, triamine alkanes, and mixtures thereof.

17. (original) The method of claim 16, wherein the aliphatic amine is 1,2-diaminopropane.

18. (original) The method of claim 9, wherein the substrate comprises a member selected from the group consisting of ceramics, polymers, cellulose, silicon, and mixtures thereof.

19. (original) The method of claim 9, wherein the step of applying the second composition is by ink-jetting, said second composition being ink-jettable.

20. (original) The method of claim 9, wherein the second composition further comprises a colorant.

21. (original) The method of claim 9, wherein the first composition further comprises a colorant.

22. (original) The method of claim 9, wherein the reducing agent is selected from the group consisting of formic acid, esters of formic acid, formic acid derivatives, hydrazine, alkali metal borohydride, oxalic acid, alkali or alkaline earth sulfites, and mixtures thereof.

23. (original) The method of claim 22, wherein the reducing agent is formic acid.

24. (original) The method of claim 9, wherein the step of applying heat occurs at from

about 50° C to about 80° C.

25. (original) The method of claim 9, wherein the predetermined pattern is a circuit.

26. (withdrawn) A substrate having a circuit formed thereon, said circuit prepared by the method of claim 9.

27. (withdrawn) A substrate having a circuit formed thereon, said circuit prepared by the method of claim 10.

28.-34. (canceled)

35. (new) The method of claim 9, wherein the first liquid vehicle further comprises non-complexed amine.